Expert Review Panel
Meeting Summary
January 5 and 6, 2006
Harbor Steps Conference Center

Panel Members Present: Darlene Cimino-DeRose, William Lorenz, Steve Lundin, Mike Meyer (Chairperson), Thomas Schmitt, Siim Sööt, Alonzo Wertz; John Howell (Panel Administrator)
Absent: Alan Kiepper

Speakers:
Sound Transit staff – David Beal, Eric Chipps, Joni Earl, Ron Endlich, Paul Matsuoka, Brian McCartan, Matt Shelden, Andrea Tull
WSDOT staff **–** Patrick Clarke, Theresa Smith
Consultants – John Perlic (Parametrix); John Chirco, Youssef Dehghani, Paul Arnold, and Larry Sauve (Parsons Brinckerhoff Quade and Douglas)

Thursday, January 5

Panel Chairperson Mike Meyer called the meeting to order at 8:40 AM.

Introductory Comments – Joni Earl (Sound Transit)

Ms. Earl reported that Panel Administrator John Howell came to the December 2005 Sound Transit Board meeting to present the Panel's comments on methodologies based on the October Panel meeting. Sound Transit has already incorporated many of the Panel's comments into the planning work on ST2. At the December meeting, the Board reviewed the scope for the 81 proposed projects. Since there were more projects than Sound Transit will be able to fund, the staff recommended setting aside approximately 20 projects and doing no further evaluation at this time. The Board confirmed four major evaluation criteria to be used to identify projects to be set aside.

The list of projects proposed to be set-aside is now being reviewed by local jurisdictions. At the next meeting, the Board will review local jurisdictions' responses, if any, and will vote on setting the projects aside.

A statewide vote in November on an initiative to repeal the gas tax did not pass, so the gas tax remains a source of transportation funding. While there was no direct impact on Sound Transit, the outcome was significant for transportation generally, including some projects related to Sound Transit, such as HOV lanes.

Question from the Panel

Q. Is there impact on Sound Transit from the recent vote to discontinue the Seattle Monorail?
A. The monorail's general counsel recently met with Ms. Earl to determine if Sound Transit would be interested in acquiring any of the monorail's property. There is one parcel that may be of interest.

Questions have been raised as to whether Sound Transit would consider expanding service in the corridors that were to be covered by the monorail. Since these corridors were within the Seattle city limits, she suggested that it is appropriate for the local transit service provider, Metro, to consider service options. She said the City of Seattle is currently studying the options for the monorail corridors.

Sound Transit Activities Since the Last Panel Meeting

Paul Matsuoka (Sound Transit)
Since the Expert Review Panel last met, Sound Transit has continued the process of prioritizing and cutting down the number of projects proposed to be part of Sound Transit Phase 2 (ST2). From 400+ possible projects in the Supplemental Environmental Impact Statement (SEIS), the regional forums held discussions last summer and cut the list to 180. Sound Transit had asked the forums to prioritize further. This activity resulted in a list of 81 projects by October.

Sound Transit staff then developed scopes and capital cost estimates for the 81 projects, using the newly revamped ridership model for the ridership estimates. A set of internal, interdisciplinary staff teams reviewed the project estimates. Each team had a different focus: capital cost, operating cost, project control, construction feasibility, and finance, and included staff from the operations side. After review by these teams, a consolidated team reviewed the entire package.

As the Expert Review Panel had recommended, the Sound Transit staff identified a limited set of key criteria to use for this stage of review. These criteria, chosen through discussions with Board members, included: 1) cost; 2) ridership/benefit; 3) risk; and 4) system integration.

At the December 8, 2005, Board meeting, the Board discussed and agreed on these four criteria. To further cut the list of 81 projects, the Board asked the staff to identify any projects that did not rate well on all four criteria. Using this test, the staff had identified 21 projects for the December 15 Board meeting, and proposed that these be set aside and not evaluated further. The Board then asked staff to go back to the subarea forums to get their views on the 21 projects. At the January 12, 2006, meeting, the Board will hear from some of the jurisdictions and will vote on the motion to set aside the 21 projects.

The Phase 2 work is still on schedule. The next major milestone will come at the end of March, when the Draft ST2 plan goes to the public for review and comment. By the summer the Board could decide on a package to go to the voters in the fall of 2006.

Follow-Up on Outstanding Issues: Cost Comparison for Sound Move to Actual

Joni Earl (Sound Transit)
See materials in Tab 5 of the meeting notebook.

***Sound Move* to Actual Costs:** In October Panel members asked how the cost estimates for *Sound Move* (Sound Transit Phase 1) compared to the actual costs. Ms. Earl reviewed the handouts and identified the following lessons:

- It is important to use a formal baseline budget stated in year of expenditure dollars. *Sound Move* included only general estimates in then-current-year dollars.

- It is important to have the project scope defined. In *Sound Move*, some projects were little more than a "dot on the map."
- The agency now has experience with construction of a variety of facilities, such as freeway ramps, to use for cost estimating.
- The differences in estimates and actual also reflect some of the construction challenges in our area (soil conditions, etc.), and delays because of financing, real estate transactions and changing market conditions.
- A large contributor to actual costs being higher than estimates was the negotiations with third party interests. In particular the negotiations with Burlington Northern/Santa Fe (BN/SF) Railroad on signal and track improvements took longer, and cost more than expected.

Link Cost Change: The Link light rail project has changed in scope, budget and phasing from the *Sound Move* estimate. What was estimated at $2.2 billion for *Sound Move* is now estimated at $5.5 billion to complete. The initial Link segment construction is running 9 percent under the (revised) budget, but with construction contingency, the cost is expected to run close to the current budget.

The Board has now formally adopted Central Link and Airport Link. Both have been baselined and are in construction. Sound Transit has also developed designs and cost estimates for University Link, which takes the line from Convention Place Station to Husky Stadium. This will be as far north as light rail will be constructed using *Sound Move* funds. Sound Transit is expecting to receive a federal grant to complete that project. The next phase of light rail in this corridor will be from Husky Stadium to Brooklyn Avenue at NE 45th Street and then on to Northgate. However, there is some uncertainty about the station location at Brooklyn and NE 45th Street.

Bus Acquisition: *Sound Move* assumed a fleet of 177 buses with a general assumption regarding the cost per bus. But the agency found that more variation was needed in the type of bus. For example, hybrid buses are now used in the bus tunnel. These did not exist at the time of *Sound Move.* Sound Transit is now tracking bus costs by subarea.

Panel Comment

Mr. Meyer noted that not many of the *Sound Move* estimates were close to actual costs. He identified two circumstances that typically have a significant bearing on project costs:

- When more mitigation is needed than had been expected, the costs increase.
- When the bid environment is competitive, the costs tend to be lower.

Questions from the Panel

Contracting

Q. How are contracts awarded? Do bidders know the engineer's estimate?
A. There is a formal request for bid and open bidding process. Bidders do not know the engineer's estimate. Contracts are awarded by the Board.

Q. Does staff need to give a rationale to the Board if the award is over a certain level?
A. The contracts include a 5 to 20 percent contingency based on project risks. Staff can authorize within that range during the project, but must go back to the Board if costs are over the contingency level.

Q. Does Sound Transit use CMGC (construction management general contractor) contracting or design-build?
A. Sound Transit has primarily used the standard design-bid-construct approach. The agency's first design-build project was for North Link, which did not work well. The work in the Rainier Valley has been closer to CMGC. The agency is looking for more opportunities to use this approach.

Estimating Experience
Q. Is Sound Transit considering doing more sensitivity analysis around scope changes and bid analyses?
A. Yes, the agency is considering what is known and unknown on each project in terms of the technical details.

Q. Many of the *Sound Move* estimates were not very close to the actual. But now that ST has more experience with transit construction, will the estimates be closer to actual?
A. Yes, for several reasons. (1) Sound Transit now has experience building related facilities, such as parking garages, as well as transit. (2) In *Sound Move* the cost estimates were very general, and in many cases the scope changed significantly (such as changing from a surface parking lot to a garage with pedestrian access). Now the scopes are better defined. (3) The agency has changed its approach to costing, and now develops an estimate "from the ground up" as a contractor would do.

Q. Does ST's experience provide a better way to estimate and value changes?
A. Yes. Real estate acquisition was the reason for higher costs in a number of projects. For *Sound Move* ST was not using true right-of-way indices, as they do now. The agency is also considering creation of a "subarea reserve" (as was done with the Express Bus program) to provide some additional cushion for changes in scope or cost estimates.

Third Party Contributions
Q. Where there are opportunities to have local jurisdictions contribute, are there models to follow?
A. Sound Transit works closely with jurisdictions. The Board passed a "scope control policy" to keep down expansions of project scopes. But if a jurisdiction is interested in contributing, Sound Transit will work with them.

Q. Has ST discussed with Washington Department of Transportation (WSDOT) the possibility of sharing costs for direct access ramps?
A. Yes, Sound Transit asks WSDOT if they have funds planned for a particular ramp. WSDOT has set amounts available under the gas tax.

Q. Regarding the cost overruns on projects involving Burlington Northern, does ST2 include projects where the agency will again have to deal with BNSF?
A. Yes, at least one of the 81 projects involves operating more trains on BN's rails on the south line. Sound Transit's option to exercise one set of projects has run out, so there would be new negotiations. This makes the project high-risk in terms of cost.

Q. Does ST have any private partners for third party funding, or are they all governments? At the last meeting, several Panel members emphasized that although public-private partnerships take time to develop, they can be very beneficial.
A. No private funders have been identified so far in the 81 projects. The best public-private partnership in *Sound Move* has been a park-and-ride with Quadrant Development, which came in under budget. Also, for transit-oriented development, Sound Transit is working with a number of third parties.

Follow-Up on ST2 Methodologies

Capital Cost Estimating Methods

David Beal (Sound Transit) and Paul Arnold (Parsons Brinkerhoff)
Mr. Ire reviewed Sound Transit's approach to ST2 capital cost estimating. (See handout, "Update: ST2 Capital Cost Estimating Methods.") There are three levels of costing:

- Level 1 – large, complex corridor projects with advanced engineering;
- Level 2 – large, complex corridor projects with conceptual engineering; and
- Level 3 – lower-cost projects that have conceptual analysis.

For Level 1 and 2 projects, allocated contingencies range from 5 to 50 percent, depending on the cost element and engineering judgment, with unallocated contingency ranging from 10 to 20 percent. Level 3 projects have allocated contingencies ranging from 25 to 35 percent; with 10 percent for unallocated contingency. The unallocated contingency is for the project as a whole.

Questions from the Panel

Q. At the time ST develops a cost estimate, have the affected jurisdictions agreed to the scope or definition of a project?
A. The cost estimates are informed by conversations with the sub-areas and jurisdictions, but there is not a formal sign-off before the initial cost estimates are issued.

Q. How much of the estimated costs are in construction and how much in non-construction?
A. Seventy-five percent of the estimates are for construction contracts. The other 25 percent are for many different administrative line items, including construction management, printing the bid documents, advertising the bid, etc.

Panel Comments

- The project scope definition is so important that it behooves Sound Transit to be as specific as possible in the project definition and to get buy-off from the jurisdictions as early as possible. The more formal the agreement, the better.
- Construction administrative costs on large projects are typically 8 percent, so the costs given appear large.

Update on Project Evaluation Methods

David Beal (Sound Transit)

See handout: "Update: ST2 Project Evaluation Methods."
The Sound Transit Board endorsed a set of evaluation criteria in July 2005, and chose four key criteria for the ST2 Round 1 screening in January 2006. These were: (1) capital, and operating and maintenance (O & M) cost; (2) ridership; (3) connectivity and integration; and (4) risk avoidance. Round 2 of the evaluation will be complete by March 2006, and will help to determine what is included in the Draft ST2 Plan that goes out for public comment. The Round 3 evaluation will take place in May or June 2006, and will determine what is included in the Final ST2 Plan.

Mr. Beal reviewed the details of the longer list of 11 measures, and noted the changes Sound Transit has made since the last Panel meeting, especially in response to the Panel's comments. (See the handout.)

Questions from the Panel

Q. Is there a cost-effectiveness or benefit-cost analysis criterion? In some agencies that is a top evaluation criterion—to answer the question: "What do we get for the money we're spending?"
A. For the system-level evaluation (as opposed to the project level evaluation) Sound Transit has added a cost-effectiveness analysis to the capital cost criterion.

Q. Will the Round 2 or 3 analyses use all 11 criteria?
A. Yes, some are used in Round 2, and all in Round 3.

Q. Does risk include capital construction risk? It may need to be called out.
A. Yes, it is included in "high-risk components" in the definition of risk for the project-level evaluation.

Panel Comments

- Sound Transit has added environmental justice to the mobility measure, but it is worth considering moving it to a higher level and making it a separate criterion because of the emphasis placed on this issue in federal funding criteria.
- The evaluation criteria need to give decision-makers the kinds of information they want. One piece of information that is not reflected here is the potential impact on congestion. This is an issue in other parts of the country. It can be stated as: "Without the transit investment, congestion in the corridor is expected to be X. With the project, congestion will by Y."
- Another concern is that a matrix of criteria needs to make sense to the decision-makers and to assist their process. It would be helpful to identify which criteria are more important than others, to establish Tier 1 and 2 criteria. The higher criteria might be cost effectiveness, ridership, impact on congestion, and air quality.
- In the National Environmental Policy Act (NEPA) process, the criteria are reviewed in terms of purpose and need.
- The key is to use criteria to compare projects. So anything that would make it clearer or easier to use the criteria to hone down the projects would be beneficial.

Update on O & M Cost Methodology

Larry Sauve (Parsons Brinkerhoff)
See handout, "Update: Final Review of O&M Cost Methodology."
The Panel had asked Sound Transit to look at costs for light rail in other transit systems in the United States and compare the per-car-mile cost. The chart of 10 other light rail systems shows that the average cost per car-mile is $9.96. Excluding the lowest and highest, the average is $9.56. The estimated cost for the 14-mile initial Sound Transit system is $10.93.

Update on Ridership Forecast Methodology

Youssef Dehghani (Parsons Brinkerhoff)
Sound Transit is in the process of incorporating the Panel's comments into the ridership model and forecast. The agency also has updated data on parking costs. Sound Transit will issue a new methodology report in approximately two months, including a new chapter with ridership forecasting.

Information Request from the Panel

Mr. Meyer noted that it is important for the Panel to receive the final versions of all the methodology reports so Panel members can confirm that they are appropriate.

ST2 Finance Plan Update

Brian McCartan (Sound Transit)
Tax Revenue Forecast
See the handout, "2006 Financial Plan Tax Revenue Forecast" and "Potential Future Financial Scenarios" located in the Background section of the Sound Transit 2 December 15, 2005 Board Briefing notebook.
The handout sheet presents the estimates for the baseline revenue forecast for *Sound Move* authorized revenues. It shows the forecast by year (2005 – 2030), by subarea, and by tax source: (1) Sales and Use Tax; (2) Motor Vehicle Excise Tax (MVET); and (3) Rental Car Tax. The table also has a section for All Taxes by subarea. The Future Financial Scenarios document provides initial estimates of ST2 financial capacity based on different levels of potential sales tax increases.

Comparison of *Sound Move* to Actual – Retail Sales and Use Tax Revenues
See Tab 11 in the meeting notebook. Mr. McCarten explained that Retail Sales and Use Tax revenues from 1997 – 2006 have been greater (by 4.7 %) than originally forecast for *Sound Move*. Actual Motor Vehicle Excise Tax (MVET) revenues during that same period have been slightly less (by 1.5%) than forecast in *Sound Move*.

Right-of-Way Index
See handout, "Comparison of Historical Right-of-Way Index (ROWI) and Current Forecast."
The index of real estate inflation rate is one of three indices that Sound Transit uses to forecast inflation (the other two being construction and the consumer price index). The right-of-way is the hardest to forecast. Sound Transit uses data for industrial and commercial property.

At a previous meeting, the Panel asked how Sound Transit's forecasts on right-of-way have compared to actual experience. This table shows that the historical growth rate in right of way

inflation has been 3.7 % from 1986 – 2004. The forecast from 2005 – 2025 projects an annual growth rate of 4.5%. Overall the forecast has worked well, but it is very localized by project.

Questions from the Panel

Tax Base Sources

Q. How does the 2006 Financial Plan Tax Revenue Forecast relate to the table in the back of the book of 81 potential ST2 projects?
A. The table in the projects book is intended to give the Board an idea of the financial capacity for ST2 projects. It shows the forecast for sales tax by subarea using different assumptions about the level of tax increase. The table shows scenarios for an increase in sales tax at 0.1 percent, 0.2 percent, through 0.5 percent. The amounts are cumulative through 2020 and 2025. The table gives a base—it does not include bonding, federal funds, or farebox revenue.

Q. Why not show farebox revenues?
A. ST doesn't know yet what the projects are, how many would be new, or when they would start. This revenue will be included for the vote on the package, however.

Q. If there is no ST2, what would happen to the money?
A. Some would be used to pay for operating expenses for *Sound Move* projects and the rest would go back to the voters.

Q. Once *Sound Move* bonds are paid for, is additional money available?
A. The debt service curve doesn't come down until the end of the planning horizon—2030. But the tax base can handle more than is needed to support operating costs, since it was structured to pay for *Sound Move* capital costs.

Q. How does the increase in online purchasing affect sales tax collection?
A. The state and City of Seattle are doing some analyses of this issue.

Subareas

Q. How are the corridors defined?
A. The North Corridor is Snohomish County and North King County. East Corridor is East King County. The South Corridor is South King County and Pierce County.

Q. The revenue table shows quite a bit of revenue in East King. Is this because their projects are not built yet? Is urban activity moving toward East King?
A. North King is lower because they have debt service on the bonds for the light rail system. East King has no debt/bonding but higher operating costs. The outer portions of the Sound Transit district have grown faster than the inner portions.

Q. Has ST made changes in revenue forecasting based on the fact that certain subareas were over-forecast in *Sound Move*?
A. *Sound Move* did not differentiate revenue growth by subarea, but Sound Transit now does so.

Next Steps for Revenue Estimates
Q. What is the next step in the methodology for revenue estimates? Are there any refinements or changes before the ST2 plan is out?
A. The core finance plan—assumptions, tax base—is done. Some modeling still needs to be done.

Q. What is the next step in building a finance plan for the ST2 projects?
A. After the Board votes at the January meeting on the motion to defer some projects, the planning group will hand off the packages of projects to the Finance Department. Finance will then work to match up the funding needs with revenues.

Comparison of *Sound Move* to Actual Retail Sales and Use Tax
Q. Is it correct to conclude that actual revenues are well above the revenue forecast?
A. Actual collections are better than the *Sound Move* forecast on sales tax, and below on MVET, but are above forecast overall.

Q. In the table under the graph "2006 vs. Sound Move Forecast Retail Sales Growth Rates," why is there a variance in some years between the 2006 sales tax forecast and the *Sound Move* sales tax?
A. The main variance is on the growth rate, not the tax base. *Sound Move* overestimated annual growth compared to actual experience. However, Sound Transit has a unique tax base (sales tax and MVET) and a unique district, since it crosses jurisdictions. The original forecast underestimated the tax base. Now ST has experience with this tax base, so they have a better idea of the revenues that can be expected.

Q. Is the growth shown in 1999 solely due to increased sales?
A. The *Sound Move* estimate was that we would collect $165 million, but we actually collected $196 million. The main reason for this increase is that the tax base grew.

Right-of-Way Index
Q. In the forecast section, why is there a big drop from 9.3 percent average in 2005 to 4.6 percent in 2006?
A. This is based on larger macroeconomic forecasts showing housing costs cooling, and other factors.

Q. Does ST have any information on differences among the subareas?
A. There would be differences, but there is not much meaningful historic data available.

Q. To what extent does Sound Transit model "what-ifs"?
A. The agency does several stress tests each year but has not done an inflation stress test.

Q. Many transit projects use existing highway right-of-way. Does Sound Transit have an agreement with WSDOT about this?
A. The agency developed an agreement with WSDOT in 1998 to get credits for Sound Transit projects on highways that help WSDOT's goals. This creates a "land bank" that Sound Transit can debit against in ST2.

Review of Study Regarding Convertible BRT in East King/I-90 Corridor

Paul Matsuoka (Sound Transit)
Sound Transit staff had looked at five mode options and several routes. The Board then chose the Bellevue-Redmond route and two alternatives for mode: light rail, and rail-convertible bus rapid transit (BRT). The staff has now completed work on initial cost and ridership estimates, and analysis for these two modes.

The analysis concludes that the travel time on the light rail system would be faster than the BRT/convertible because there would be no need to transfer in downtown Seattle. The capital cost for the BRT is less than for light rail. But adding the cost to convert the BRT to light rail, the overall cost of the convertible BRT is higher than the cost for light rail by $300-$500 million. The impacts of conversion would include the traffic impacts from shutting down the guideway for retrofitting, which would put the buses back on surface streets. It is possible to build in all the rail fittings upfront, but this adds to the initial capital cost. A middle course would be to build in some lower-cost items such as conduits. However, the timing of the conversion is a consideration. The more time elapses before conversion, the greater the likelihood that the technology will change.

Four locations where local buses could access and use segments of the guideway were considered. Two were not feasible. Those at Mercer Island and Overlake Transit Center were possible. However, since these investments would not be useful after conversion to light rail, the staff eliminated these intermediate access points.

Another challenge is the center platform, since buses usually do not have doors on both sides. The solutions include purchasing buses with doors on both sides.

Questions from the Panel

Q. The comparison of modes is challenged by the fact that light rail is a one-phase alternative, while convertible BRT involves two phases. During the conversion time, transit service would likely be worse. Does the Board understand that?
A. The Board provided direction on the modes to analyze. This sort of conversion has not been done elsewhere in the country. The closure last fall of the Seattle Downtown Transit Tunnel was a first. It involved significant planning and cooperation by Sound Transit, Metro, Community Transit, Seattle Transportation Department, Seattle Police and others.

Q. Has Sound Transit looked at the effect on riders during the conversion period?
A. Yes, the time would be slower and the rider experience would not be as convenient as before or after the conversion.

Q. Is the conversion cost built into the project costs?
A. No, these costs are called out but not counted in the total for the project.

Q. Has Sound Transit done any analysis on when to convert in terms of the criteria for making this decision, such as reaching a certain ridership?
A. No.

Q. Is there a possibility that you might never convert?
A. Sound Transit cannot ask for funds for projects that are not being done in this phase. The funding for conversion would come in a later phase.

Q. Costs for the BRT are higher because of the need to transfer in downtown Seattle. Does ST have an estimate of the percentage of Eastside riders who would need to transfer?
A. No. But transfer would be required whether going north or south, while with light rail, a transfer would be needed only to go south (such as to the airport), not to go north to the University.

Q. Has ST looked at other services, such as express buses, that would not require a transfer?
A. We did look at a busway option that would not require a transfer in downtown Seattle. But the cost was about the same as to travel on surface streets. There would be some difference in ridership, but it is not a large difference.

Public Comment

Mr. Meyer asked if any members of the public present wanted to provide comments.

Richard Harkness: Mr. Harkness emphasized the important role the Panel plays on behalf of local citizens, especially in posing questions on mode choices and costs. He suggested that the Panel ask whether Sound Transit is providing the kinds of information the public needs to have in order to understand the agency's choices and make decisions, such as pro and con statements, key metrics and alternatives analyses. He questioned whether adequate data have been presented on the pros and cons of dropping the BRT on high-occupancy vehicle (HOV) lanes option for I-90. He stated that it is important to allow the public to see how all the alternatives are designed, and to provide equivalent cost comparisons

Don Padelford: Mr. Padelford referred to an e-mail that he sent to John Howell about BRT systems (see Tab 12 in the meeting notebook). He noted that WSDOT is going to study alternatives for I-90 including using the center span as a HOT lane. He suggested that the best transit alternative for I-90 is BRT on HOT lanes. This alternative would be immediately useful and would not add to congestion since cars could also travel in the HOT lane.

Will Knedlik (Citizens on Sound Transit and the Cost Alliance)**:** Mr. Knedlik pointed to the section in state law requiring the development of options. He stated that BRT on HOV may be the best option since it would address both transit and congestion. However, it is not currently being considered.

Update on WSDOT Traffic Study

Theresa Smith (WSDOT)
WSDOT has a traffic study underway for I-90, which looks at multiple scenarios including BRT/HOV. A draft should be available by the end of the first quarter of 2006.

Information Requests from the Panel

Mr. Meyer noted that the study is important for the Panel to consider before writing its letter of findings to the funders. He asked if it would be possible for the Panel to get preliminary results as soon as they are available.

Review of Selected ST2 Projects: I-90/East Corridor High-Capacity Transit

John Chirco (Parsons Brinkerhoff)

Conceptual studies are underway for high-capacity transit (HCT) for light rail and for rail-convertible BRT in three segments: Seattle Downtown Transit Tunnel to Overlake Hospital, Overlake Hospital to Overlake Transit Center, and Overlake Transit Center to Redmond. The alignment is a total of 18 miles, with 7 miles on existing road, 9 miles aerial, and 2 miles underground. The study includes stations and associated features—such as park-and-ride lots and roadway changes. The projects are not designed or defined individually but as part of a system.

The details of the conceptual studies will help guide the cost estimates. A preferred alignment has not yet been established. The studies are using a prototypical alignment for the purpose of estimating costs.

Questions from the Panel

Q. How was it decided whether the alignment at a particular location would be aerial vs. at-grade vs. underground?
A. The choices are based on a consensus of the design team and the jurisdiction as to what is feasible and desirable for a specific segment.

Q. What are some of the larger third-party issues in this alignment?
A. The major issues are the location of the guideway along WSDOT's right-of-way, and the relation of projects to other infrastructure projects (such as the R-8A project on I-90) and timing. On some WSDOT structures (such as the Rainier Ave. bridge), structural modifications or strengthening may be needed. There is also one segment that crosses BN/SF right-of-way in Redmond, and some environmental considerations (such as Mercer Slough) and historic structures to be considered.

Q. Are you doing any investigation for tunneling?
A. The agency is using the cost information from Sound Transit's tunnel work for North Link.

Q. What is your contingency for underground work?
A. 35 percent. For the East Corridor, the larger projects have contingency ranging from 9 percent to 15 percent. But each category of costs has its own contingency.

Q. Along SR520, is there any issue with using freeway right-of-way for the transit guideway?
A. WSDOT has identified several projects for improvement in this area, so the team is designing the guideway as an elevated structure at the edge of the right-of-way.

Update on I-90 Bridge Operations

Patrick Clarke (WSDOT)

See handout, "I-90 Bridge Studies: Structural Feasibility and Live Load Simulation for Light Rail Conversion."

The I-90 bridge was designed to carry light rail, but today's light rail is 30 percent heavier. On a floating bridge, ballast is crucial. With normal track and vehicle weight, there would not be sufficient ballast for light rail. WSDOT considered several options to lighten the overall weight, such as removing concrete barriers and replacing them with metal, and limiting the location of rail on the bridge deck. They found enough changes to resolve the problem, but the system is still very close to the maximum weight for the bridge.

Another important consideration is the approach structure and transition spans. Both would need to be strengthened to handle light rail. The cost to retrofit the approach structure is close to the replacement cost.

WSDOT conducted a full-scale, live load test of the bridge in September 2005. This test validated the computer model results showing that the bridge structurally can carry light rail, with the modifications noted to solve the ballast problem, and strengthening of the approach structure and transition spans.

There are two additional operational considerations. One is the weather. The current WSDOT operations manual calls for shutting down the bridge when wind speeds reach 45 mph. Also, the lake level fluctuates by almost 5 feet, and water can wash onto the bridge in a storm. WSDOT estimates that one-year storm conditions combined with live load of light rail on the bridge would bring the bridge to 98 percent structural load capacity. The second consideration is the type of screening along the pedestrian/bike pathway. Any screen in place will need to allow wind to pass through.

Questions from the Panel

Load Test and Experience

Q. Is there anywhere in the world where there is light rail on a floating bridge? Is there any data other than theory and modeling?
A. No.

Q. The live load test addressed load only. What about running the track on the transition span?
A. Track designs for the bridge in the past took the span into consideration.

Q. How long is the transition structure?
A. It's 150 feet. The load test we conducted included simulating the motions due to rail traffic on this structure.

Q. What is it about light rail now that makes it 30 percent heavier than the rail that was planned when the bridge was designed?
A. The cars of a light rail system today are actually heavier than the cars on heavy rail. Today's low-floor light rail cars have their machinery on top and, therefore, need ballast. Also, light rail now uses a double-track system for safety, instead of a single track.

Q. Would it be feasible to use heavy rail?
A. Heavy rail gets its power from the third rail, so it has to run the same way everywhere. You can't have a mix of grade-separated, surface and tunnel.

Q. Light rail would increase the bridge load to 98 percent of maximum?
A. Yes. But keep in mind that structural designers are conservative, since they can't test their conclusions the way aircraft designers can.

Q. Would there be an effect on load from the pedestrian/bike screening?
A. We would not allow any screening that would affect bridge load.

Q. Is there a limitation to the number of trains that can be on the bridge at once?
A. Yes. The load test included two four-car trains passing at mid-span (for the highest stress) and at the expansion joint and location of counter torque.

Storm Conditions
Q. If WSDOT needed to close the bridge for the light rail in a storm, would it be closed for auto traffic, too?
A. For cars the more important weather effect is the water washing across the roadway.

Q. Does anything more than a one-year storm call for closing the bridge? On average does a one-year storm happen every year?
A. We can get three one-year storms in a year. But for the I-90 bridge, what is important is wind speed *and* direction, and how the bridge is riding. A one-year storm from the north would be more likely to shut the bridge down than one from the south.

Q. Based on storm history, the bridge has been shut down two times. How long was it shut down?
A. Once was for a week, the other was a full day.

Q. Is there any way to determine a threshold where the bridge would need to be shut down to light rail but not to traffic?
A. We would probably shut down to all vehicles. But it's hard to be sure until we have some experience with light rail operation, especially on the track across the transition.

Panel Comment

- A Panel member expressed strong interest in receiving further information about the operation of light rail across the transition structure in terms of how the rails would function.

This session adjourned at 4:15 PM.

Friday, January 6

Mr. Meyer called the meeting to order at 8:40 AM.

ST2 Round 1 Project Evaluation/Screening

Paul Matsuoka (Sound Transit)
See Tab 9 in the meeting notebook.

Staff reviewed the 81 proposed projects using the Round 1 screening criteria in order to identify any that did not rate well against these criteria. The list of projects that did not meet the criteria then went back to the subarea forums and jurisdictions for review and comment. These projects, by criterion, are as follows.

Ridership: The staff looked at ridership in terms of the number of daily riders. The projects ranged from less than 500 riders/day to 50,000 riders/day. The staff decided to cut any projects that would have less than 1,000 riders/day. This cut six services and three stations. Of these, the subareas differed on project E11 (Enhanced Transit for Metro Route 240), which would provide service for Bellevue-Newcastle-Renton. Newcastle is located east of I-405. The route would need to deviate off the 405 corridor, adding to the travel time and resulting in lower ridership. There is an existing Metro route on surface streets serving this area. However, the jurisdiction said the project was not scoped correctly.

Risk Avoidance and Cost: The staff identified six HOV access ramp projects that did not meet these two criteria. Access ramps have worked well when there was a fairly wide median buffer that gave room for an access ramp. The six ramp projects in question were in locations without a median, and would be too expensive to put in unless there is a funding partnership with WSDOT or a local jurisdiction. Sound Transit staff did ask WSDOT if there were active, funded projects or partnerships in the areas of these ramps. Where that was the case, the projects remained on the list. Local jurisdictions have indicated a desire to keep the following three projects.

- E13 (SR-520 at 108th): This HOV access ramp would connect SR 520 to 108th Ave. NE. It is a high-cost project, since the real benefits from the project would require HOV lanes in both directions on 520 and across the bridge. The corridor now has a westbound HOV lane up to the bridge deck. The corridor would need to be redeveloped on the land side to put in an HOV lane eastbound and move the HOV to the inside lanes. Developing HOV lanes on the outside shoulder is less costly; however, the access ramp is only feasible with inside lanes.
- E17 (Express Bus Flyer Stop on I-405 at NE 85th in Kirkland): An inline station would make sense at this location, but a direct access ramp has limited utility for transit and would probably require a rebuild of the interchange or another interchange nearby.
- S8 (Express Bus Access Ramp on I-5 at South Industrial Way): This project is located in the North King County subarea but that would benefit riders and routes in South King and Pierce counties. This ramp was scoped as transit-only but might need to be expanded to HOV. A recent transit-only ramp on Ash Way in Snohomish County raised controversy locally among people who thought it should be available to carpools. The benefit of the S8 ramp is to get transit through downtown Seattle and access to the E3 busway. North King and Pierce did not put this project on their priority list, but South King is interested in it.

Questions from the Panel

Q. Is there any value in keeping these projects for system integration?
A. S8 is the one that has the most integration value.

Q. Are these HOV access ramps for transit only?
A. S8 is transit only; the rest are transit and carpool.

Q. On E17, what is the local interest in retaining the project?
A. The street (NE 85th) connects the downtown centers of Kirkland and Redmond.

Q. Why did Secretary McDonald ask that three projects be reconsidered?
A. The HOV access ramps are in a 405 improvement corridor, and may be part of the BRT solution for I-405 congestion. WSDOT is especially interested in S8 to relieve bus congestion, and has expressed interest in working with Sound Transit on cost and design alternatives. The timing might be a challenge, however.

Q. How does ST weigh HCT projects that also include auto on HOV, or the auto HOV vs. transit-only ramp?
A. The challenge is that the statutory authority includes "and supporting services," so it is hard to draw the line between what is part of the regional transportation system and what is local. Some require partnerships. For example, for the *Sound Move* direct access ramp in North Renton, Sound Transit does not have the funds to do the freeway reconstruction that is needed. The project is on hold to assemble a partnership with WSDOT and local jurisdictions.

Round 1 Evaluation, cont.

Risk Avoidance/System Integration: The staff identified three business access and transit (BAT) lane projects to defer because they are tied to physical constraints in their respective corridors. These are E18 on SR 522 in Bothell, E19 on SR 522 in East King, and S10 on SR161 in South Pierce. There are three BAT lanes still on the list—two on SR99 and one on SR522. These have strong partner support.

System Integration/Cost: The staff identified three park-and-ride lots to defer: N18 in Lake Forest Park, E20 in Bothell, and S15 in Burien. Bothell wants the project but does not yet have a preferred site identified. The Burien location is an existing park-and-ride that the city and Metro are redeveloping for transit-oriented development. The net gain in parking spaces would be only 100 spaces. There is a developer who may be interested in the transit-oriented development but no firm commitment has been made. Given the uncertainty of the market and the small gain in parking spaces, the staff recommended taking this project off the list.

In this process of sending the list of proposed deferred projects to the subarea forums, Sound Transit received many comments also from jurisdictions whose projects are still on the list, but had questions or requests to change the scope. It is clear that the jurisdictions are interested in being involved.

Status of the First Hill Work Program

Ron Endlich (Sound Transit)
See handout, "North Link Update: First Hill Work Program." The presentation (handout and Tab 10 in the meeting notebook) described the alternatives to the First Hill Station and potential transit service improvements for First Hill. The alternatives included construction changes, alternative station locations, and a Capitol Hill to First Hill light rail spur, along with a variety of transit service improvements and connections between First Hill and Link stations, including a streetcar. The Sound Transit Board is expected to review the recommendations in January.

Questions from the Panel

Q. Would this still be part of ST1?
A. No, it is part of the ST2 projects that are being evaluated. If a streetcar became part of ST2, it could be up and running early with University Link.

Q. The area is congested. How can faster bus or streetcar service be provided?
A. The advantage of traveling up Jackson to Broadway is avoiding the off/on ramps from I-5. The most congested area is Boren and 12th Ave. This area also poses a grade challenge for a streetcar since it is an 8.5 percent grade, and 9 percent is the maximum for streetcars. However, Broadway north of Boren is wide enough that there could be signal priority and limited stops for transit.

Q. Would the Madison route be just an upgrade of existing bus service?
A. Sound Transit will look at route restructuring, such as a contra-flow lane for transit downtown. The City of Seattle and Metro are very interested in providing better service through this area to/from the ferry terminal.

Q. How well-defined will the alternatives be by the end of March for the ST2 package?
A. The packages for March are to show what is possible, but most projects will continue to go through scope and cost refinement. The goal is to complete conceptual engineering work in May so the Board has better information on costs and alternatives before the final plan is adopted in June.

Q. The N7 project description says there will be 3,000 riders/day. Does this indicate that ST would capture 3,000 of the projected 5,500 daily riders for the First Hill Station?
A. Yes, along with riders making connections to other services.

Level 1 Project: North Link Update

Ron Endlich (Sound Transit)
See handout, "North Link Update: University District to Northgate." Level 1 projects are large, complex corridor projects for which advanced engineering has been done. The University District to Northgate segment is 4.3 miles. Sound Transit has completed 30 percent design and quantitative risk assessment. The project includes some scope changes: (1) The Brooklyn Avenue station site might need to be relocated because of Safeco's expansion plans; and (2) for the Roosevelt station, Sound Transit may need to acquire more parcels to protect the station. The

Northgate terminus needs to be able to be expanded later. The total capital cost estimate range is $1,152 - $1,267 billion in 2005 dollars.

The project will be part of the ST2 project review and SEIS in March. A record of decision from the Federal Transit Agency is expected in April. There will not be further design work until after the vote on ST2.

Questions from the Panel

Q. What percent of the total cost is the grant ST is seeking from the federal New Starts program? Could ST get another grant for North Link?
A. The grant amount would be 50 percent of the total. Generally, an agency cannot get simultaneous grants.

Q. Will the Northgate terminus station connect to bus service?
A. Yes, it is next to the existing Northgate Transit center. However, Metro is considering relocating the Transit Center to the other side of the light rail line. Some of the existing express bus service from the Transit Center would be replaced by light rail.

Q. Is there an expected increase in ridership, or would the project switch riders from existing Metro service?
A. The projected University Link ridership to the airport is 114,000 per day. Extending to Northgate increases this to 150,000 riders. The University District to Northgate project ridership of 50,000 includes existing and new riders.

Level 2 Projects

These are large, complex projects that have conceptual engineering completed.

Project N1: Everett Light Rail

Matt Shelden (Sound Transit)
This is a 2 ½-mile stand-alone light rail project to connect Everett Station to Everett Community College and northern neighborhoods. It would use the same type of cars as Central Link so it could be connected to Central Link in the future. It would operate with 10-minute peak and 15-minute off-peak service. It is scoped to run in the middle of the street with center platform stations. It passes evaluation by the four initial screening criteria. The costs are based on current costs of Tacoma Link and the construction cost for light rail in the Rainier Valley. Costs are estimated at $272-$313 million for capital, and $3.7 million/year for operation. Ridership is estimated at 3,000 daily boardings in 2030. The line would connect with transit services from three different agencies.

Questions from the Panel

Q. What is “heavy maintenance”? The report indicates it would not be done at this location.
A. Sound Transit assumes that there would be a facility in Everett for daily upkeep, but not for major body work. For that maintenance, the car would be put on a flatbed and trucked to the Central Link maintenance center (until such time as there is a light rail connection between North King and Snohomish Counties).

Q. Is the layout for two parallel tracks?
A. For the cost estimate, full double-track is assumed, but it might need to be an integrated single track.

Q. Has Sound Transit reviewed the scope with the City of Everett?
A. The city has reviewed it, though has not yet provided a formal response. Sound Transit needs to discuss traffic impacts with them.

Q. Are there any funding partners?
A. The current assumption is that Sound Transit is providing all the funding, but the agency is open to partnership.

Panel Comment

- Regarding single track, Sound Transit might talk with Baltimore, since they have had some challenges with use of single track.

Project S1: Link Extension: S. 200th St. to Kent-Des Moines Road

John Perlic (Parametrix)
This is a 2.4-mile, elevated extension along the side of Highway 99, which would take Central Link one station further south. There would be a center platform station adjacent to Highline Community College. The college is the second largest employer in the area, after Sea-Tac Airport. The project includes a 500-space Park-and-Ride, and a new maintenance and operations base south of the station, which could serve an eventual extension farther south to Federal Way. The cost range is $418-$480 million (or approx. $200 million per mile). This is based on Central Link costs. Ridership is estimated at 5,000/day.

Questions from the Panel

Q. Why is there significantly higher cost than for Everett?
A. The project includes an operations and maintenance station, and a higher contingency for right-of-way acquisition. Right-of-way is one of the risks in this project.

Q. When right-of-way is acquired for city/county roads, how do the payments to local governments compare to payments to the state for use of freeway?
A. So far, South Transit has not paid local governments for use of right-of-way, but ST does pay local governments a variety of utility and street use fees.

Q. What is the level of buy-in from local jurisdictions?
A. There have not been many discussions with the cities of Kent or Des Moines, but Highline Community College is very supportive and would like the station as close to campus as possible.

Project S6: Extension of Tacoma Link West to Tacoma Community College

This project assumes that the system converts to Central Link-type cars and power supply. (Project S7 is the same but without conversion to Central Link vehicles and power. The cost of converting is covered in Project S5.) S6 is a 5 ½-mile, at-grade extension, with seven center platform stations. At the west end terminus, there is a 500-space Park-and-Ride, replacing an existing 100-space lot. A challenge is that the right-of-way is tight for the route on 6th Avenue,

and Sound Transit would need to remove street parking and restrict some turns. The cost is projected to be $520-$600 million.

Questions from the Panel

Q. Is there buy-in from the City of Tacoma?
A. There have not been extensive discussions, but the alignment follows a major bus route.

Q. There were two possible routes presented to the Panel at previous meetings. Why was this one chosen?
A. There has not been a firm decision. The length of the alternatives is similar. The street right-of-way on this alignment is on the high end of the cost range. Since the alignment has not yet been chosen, the staff used the more expensive alternative in order to give maximum flexibility for costing.

Q. Is there an issue with steep grades going out from downtown?
A. Yes, in places it is 6 percent grade, but the longest distance at this grade is 2,000 feet. However, this limits route options to probably only one route out of downtown.

Project S27: Link Extension from SeaTac Airport to South 200th

This extension of 2 miles just south of the SeaTac station was part of the original *Sound Move* plan, but no funds are available to build it in that phase. It is an aerial alignment along 28th Ave. South, with a 630-space Park-and-Ride. The estimated cost is $250 - $285 million. It would generate 5,000 additional riders. Because it was part of *Sound Move*, more advanced engineering and the environmental assessment are done. The level of design is 30 percent for the station and 5 percent for the alignment.

Level 3 Projects

These are lower-cost projects for which there is conceptual analysis. Sound Transit is presenting a representative sample to help the Panel understand the methodology.

Project N23: Sounder Station at Edmonds Crossing/Ferry Terminal

Matt Shelden (Sound Transit)
This site is a multi-modal terminal. The current Edmonds station is temporary. The new station would be for a six-car Sounder commuter rail train. There would be a 500-space Park-and-Ride with a pedestrian bridge to the station. The tracks now at the station would need to be widened. The station would need to rest on a deep-pile foundation since it is next to Puget Sound. It would serve approximately 500 daily riders in 2030 for four, peak-period, round-trip trains. Other connections at the station would be the Washington State Ferry Kingston-Edmonds route and bus service. The estimated capital cost is $63 - $68 million. The cost estimate is based on the average Sounder construction cost for *Sound Move*, plus a high contingency (42 percent) for right-of-way because of the partnerships needed and the constrained land area.

This project has higher risk because it involves joint development requirements with Washington State Ferries and the Burlington Northern Santa Fe Railroad (BNSF). There are also environmental risks given the adjacent saltwater wetlands and a Unical oil storage site. There is a

potential that Sound Transit would need to mitigate the impact of construction for BNSF operations.

Questions from the Panel

Q. Who would handle remediation for contaminated soils?
A. The cost is included in Sound Transit's share. Quite a bit of environmental work has already been done by Washington State Ferries.

Q. Is the contingency high enough? It seems lower than for projects involving elevated light rail.
A. The 42 percent contingency is based on Sounder projects, most of which involved soil clean-up.

Q. Are the needed ferry terminal, roadway access and intersection with SR 104 in place?
A. No, Washington State Ferries is in the design and environmental review phase for these.

Q. If daily ridership is 500, why is a 500-space park-and-ride needed?
A. The ferry transfer traffic is significant.

Project E12: Express Bus Direct Access and Park-and-Ride at Brickyard

Andrea Tull (Sound Transit)
This project is a direct access ramp to I-405 and a 500-stall parking garage. The current Park-and-Ride is over capacity, and the access to I-405 involves weaving through lanes. WSDOT identified the need for this project. The cost is based on Sound Transit's experience with Park-and-Rides and direct access ramps. Two challenges are that it would require splitting 405 lanes to fit in the access ramp, and there are wetland issues involved. The cost range is $279 to $301 million.

Question from the Panel

Q. The costs seem high for a Park-and-Ride and ramp. Also, what is the basis for the $10 million wetland mitigation cost?
A. The project requires highway lane reconstruction. The $5.2 million/mile and $62 million for lane reconstruction came from WSDOT. The wetland mitigation amount is a placeholder, with the cost to be determined based on what WSDOT and the Department of Ecology later determine needs to be done.

Project S10: Express Bus BAT lanes and Signal Priority on SR 161

Larry Sauve (Parsons Brinkerhoff)
This is a heavily traveled corridor not currently well served. The bus route would go from the Sea-Tac Link station, and a Park-and-Ride lot, to Auburn and Pierce County employment centers. It also would serve commuter rail stations during non-commuter hours. The project involves BAT lanes and transit signal prioritization.

Questions from the Panel

Q. At a daily boarding level of 1500 (one-half million a year), would the $2 farebox recovery be more than the operating cost? What is Sound Transit's recovery ratio?
A. The average fare/rider may be high. The operating costs are based on ST Express routes. The target recovery ratio for buses is 20 to 30 percent. Sound Transit is adding farebox recovery to the list of possible decision criteria.

Next Steps and Next Meeting

Meeting Date

There was discussion about the next steps in the Sound Transit Board decision process and when it would make sense for the Panel to meet. The Board will meet in March to look at the packages and projects and approve a Draft Plan or multiple plans. Those plans will then go out for public comment between March and June. The materials for the Board will be ready in mid-February at the earliest. It would be helpful to have Panel review of the methodologies as they apply to specific packages, especially for the financial methodology. However, the timing is challenging to have materials ready for a Panel meeting before the March Board meeting.

Decision: The Panel decided to set a meeting for early March, but to monitor whether there will be enough information available to make a meeting worthwhile at that time. [**Note:** The March meeting dates were canceled in February. A new meeting date for April 20-21 was also canceled.]

Letter of Comment

The Panel decided to send a letter of comment to the Panel's sponsoring agencies, based on information provided at this meeting. The Panel members proposed the following topics for the letter, and provided preliminary thoughts about the content.

1. **Process of screening and prioritization, Board outreach to subarea forums.** Generally, the screening process (discussion with the Board, subarea forums, and use of internal teams) is reasonable.

2. **Third party agreements**. Panel members suggested that Sound Transit talk now with other agencies and private entities about project scopes and costs and look to develop as formal an approval as possible as the project scopes and budgets become more defined. It is especially important to work with WSDOT on agreements on ramps, use of right-of-way, and lane shifting. Local jurisdictions would benefit also. There was a question as to why Sound Transit "pays" for use of WSDOT right-of-way, but not for cities/counties right-of-way.

3. **Need for as much definition as possible in the project scope**

4. **Evaluation criteria for screening**. The criteria appear to be appropriate, but Panel members were concerned that there not be so many criteria that they end up not being helpful. Even so, Panel members suggested adding cost effectiveness and environmental justice as criteria. One suggestion for managing the criteria was to designate priority "tiers" (such as Tier 1, Tier 2) to highlight the most important criteria.

5. **Financial analysis**. The methodology is in place, and the application in development. Growth rates are key.

6. **BRT convertible/LRT alternatives**. Panel members noted that the Sound Transit Board needs to understand what the alternatives imply (that both are ultimately light rail), and that going through the conversion will involve a period of no HCT transit on the I-90 center roadway. The projects are in an important corridor for HCT. If Sound Transit seeks FTA funding, they may need to revisit the BRT-HOV alternative.

7. **Floating bridge**. Panel members continue to have questions about the bridge's load-carrying capability. Most significant is that Sound Transit would be breaking new ground in the engineering of floating bridges. There was also concern about the potential of increased closure of the bridge in one-year storm events, and the impact on communities and on HCT. There was a question whether the current-sized rail needs to be re-addressed in the rail design.

8. **Triage system – projects from the list of 81**. The process for reducing the list to the right number is reasonable and appropriate for the current stage of planning.

9. **First Hill Work Program and analysis – appropriateness and reasonableness.** Sound Transit has followed the scope outlined in October. The trade-offs and analysis seem reasonable, and the alternatives seem appropriate for serving the First Hill area. There is a challenge with the schedule being out-of-synch with the rest of the process, in that the Board will not have the same level on information for this project when it makes preliminary decisions about the ST2 package.

10. Cost allocation, use of contingencies, associated with levels

There was discussion about the level of the Panel's responsibility in making an assessment of the cost estimating work: Is the Panel responsible only for assessing the cost methodology, or also for reviewing the methods for developing each project cost? There was a question as to whether there was enough time to review all 60+ projects given the decision timeline of the Board, even if the Panel hired someone to undertake the review. Since the Panel has reviewed the methodology and the contingencies, another possibility might be to review the methods as applied in a few selected sample projects. The Panel concluded that they should ask the three sponsoring agencies what level of review they expect from the Panel.

Mike Meyer asked Darlene Cimino-DeRose to prepare a paragraph or two on item 5 (financial analysis) and Tom Schmitt on item 7 (floating bridge). He will work with John Howell to develop the remaining topics for a draft letter, and then circulate it to the Panel.

The meeting adjourned at 1:15 PM.